ORDER NO. AD9702019C2

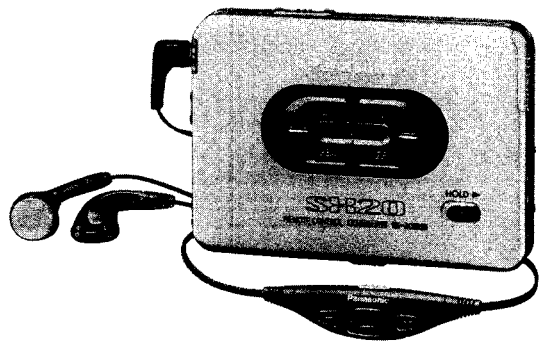
Service Manual

Mini Cassette

* DOLBY SYSTEM

Stereo Cassette Player

RQ-SX20



Colour (K)..... Black Type
(S)..... Silver Type

Areas
E..... Europe.
EB ..... Great Britain.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Mechanism Series (AR10)

Specifications

Power Requirement:
Battery; DC 1.5 V one "AA" size battery (not included) (Panasonic R6, LR6 or equivalent not included)
Rechargeable Battery; DC 1.2 V with an included Panasonic Rechargeable Battery (RP-BP62EYS1) ×1
Power Output: 4 mW + 4 mW...RMS (max.)
Output Jack:
Headphones; 30 ohm (stereo mini jack diameter 3.5)
Dimensions: 108.8(W)/75.3(H)/20.2(D) mm
Weight: 160 g (with rechargeable battery)
Charger:(E)
Input; AC 230 V, 50 Hz, 4 W (RP-BC155AEY) (included)
Output; DC 1.2 V, 340 mA
(EB)
input; AC 240V, 50 Hz, 4 W (RP-BC155EBYA) (included)
output; DC 1.2 V, 350 mA
Frequency Range:
Normal/High/Metal; 40 ~ 18,000 Hz (– 6 dB)

Playing time:
(When used in hold mode, at 25 degree temperature and on flat stable surface,)
Panasonic dry cell battery (R6): Approx. 14 h
Panasonic Alkaline dry cell battery (LR6): Approx. 35 h
Rechargeable battery (when rechargeable 2 hours.): Approx. 11 h
Panasonic dry cell battery (R6) with rechargeable battery: Approx. 25 h
Panasonic Alkaline dry cell battery (LR6) with rechargeable battery: Approx. 45 h
The play time may be less depending on the operating conditions.

Recharging time: About 2 hours
Motor: Electrical governor motor
Track system: 4 track, 2 channel, stereo
Tape Speed: 4.8 cm/s

Note: Design and specifications are subject to change without notice. Weight and dimensions are approximate.

⚠WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

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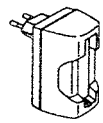
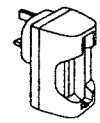
■Accessories

Stereo earphones with remote controller .....1 pc.
(RFEV133P-KS)

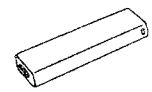
Charger .....1 pc.
(RP-BC155AEY)
: For (E) area.



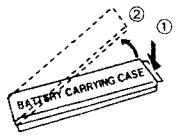
(RP-BC155EBYA)
: For (EB) area.



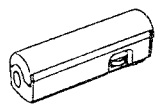
Rechargeable battery .....1 pc.
(RP-BP62EYS1)



Rechargeable battery carrying case .....1 pc.
(RFA0475-Q)

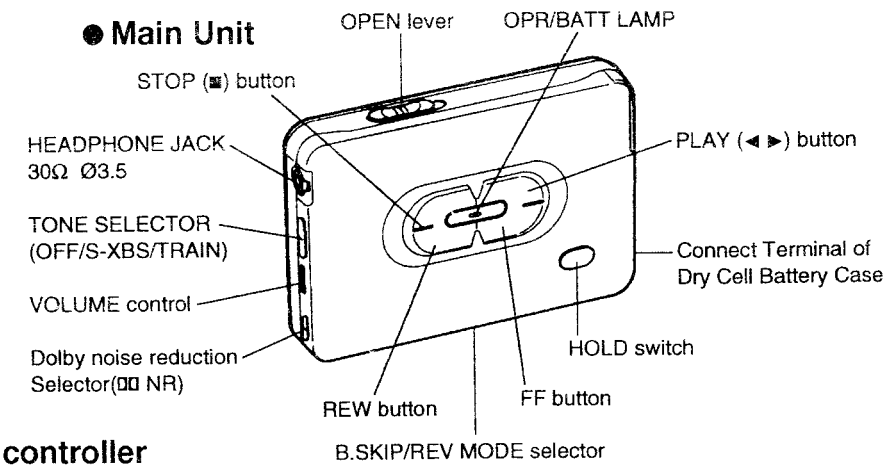


Dry cell battery case.....1 pc.
(RFA0617-H)

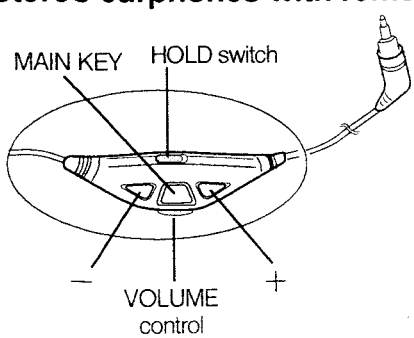


■Location of Controls

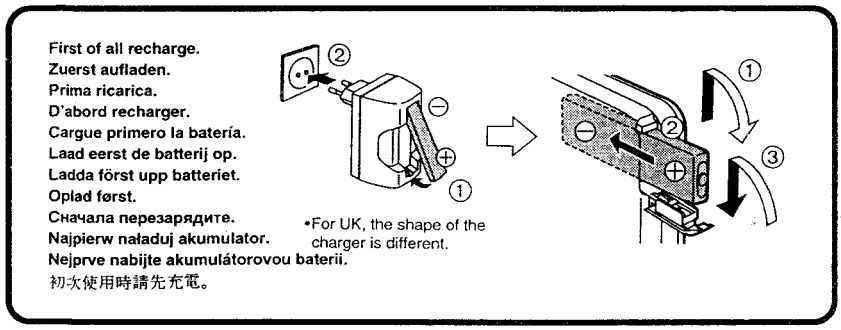
● Main Unit



● Stereo earphones with remote controller



■About Batteries



- Use only the included charger when recharging.
- Normally 2 hours recharging will give about 11 hours tape playback (at 25°C).
- The rechargeable battery can be recharged about 300 times. When its operation time becomes extremely shortened, that's time for replacing it.
- To extend the playback time, install both types (rechargeable and dry cell) of battery.

(For United Kingdom and Continental Europe)

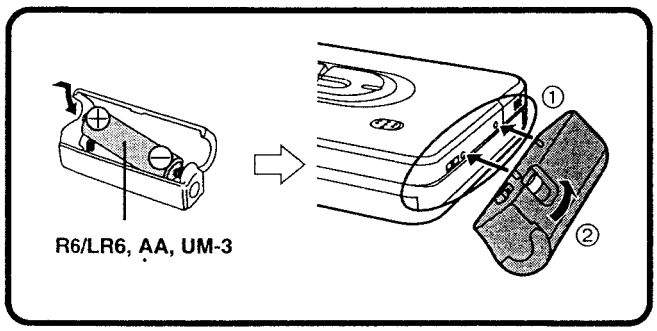
Notice about rechargeable battery

The battery is designated recyclable. Please follow your local recycling regulations.

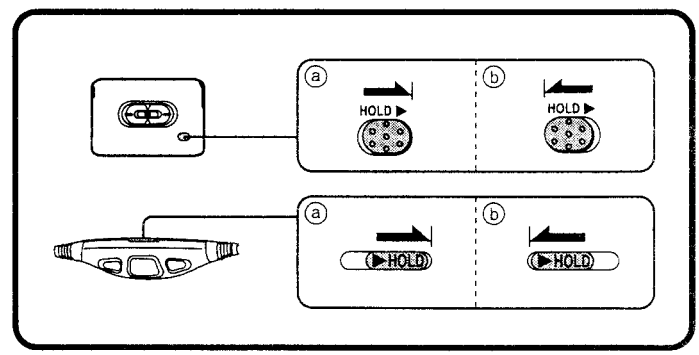
When the battery becomes weak

The OPR BATT indicator will dim or turn off.

Recharge the rechargeable battery or replace the dry cell battery with a new one.



■About Hold Function



The function prevents the unit from being operated even if one of the buttons is pressed in error.

ⓐ To hold

ⓑ To release (Before operation)

- Each of this function on the main unit and that on the remote controller works individually (RQ-SX20 only).

■Playing a Time

This unit is equipped with an auto tape select function, so you can use normal, high or metal position types of tape.

Closing the cover, the tapeslack will be wound automatically and playback will be expected to start form the forward side.

Ⓐ Forward side

Ⓑ Reverse side

- Before using VOLUME on the remote controller, be sure to adjust VOLUME on the main unit to "5–7" position.

To change sides A

To wind the tape B

TPS (Tape Program Sensor) C

You can skip as many songs as the number of times the button is pressed (up to 3 times).

DOLBY B NR D

When playing the tape recorded with Dolby B NR, setting the DOLBY NR selector to ON reduces noise to ⅓.

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To select the reverse mode (REV MODE) E

BLANK-SKIP F

When a silent part of more than 13 seconds is detected during playback, fast-forwarding automatically starts and then playback of the opposite side of the tape starts from the beginning.

When small sound continues for more than 13 seconds (classical music, etc.)

Since the unit may start fast-forwarding, set the selector to OFF.

Regarding the basic operation, refer to the left illustrations.

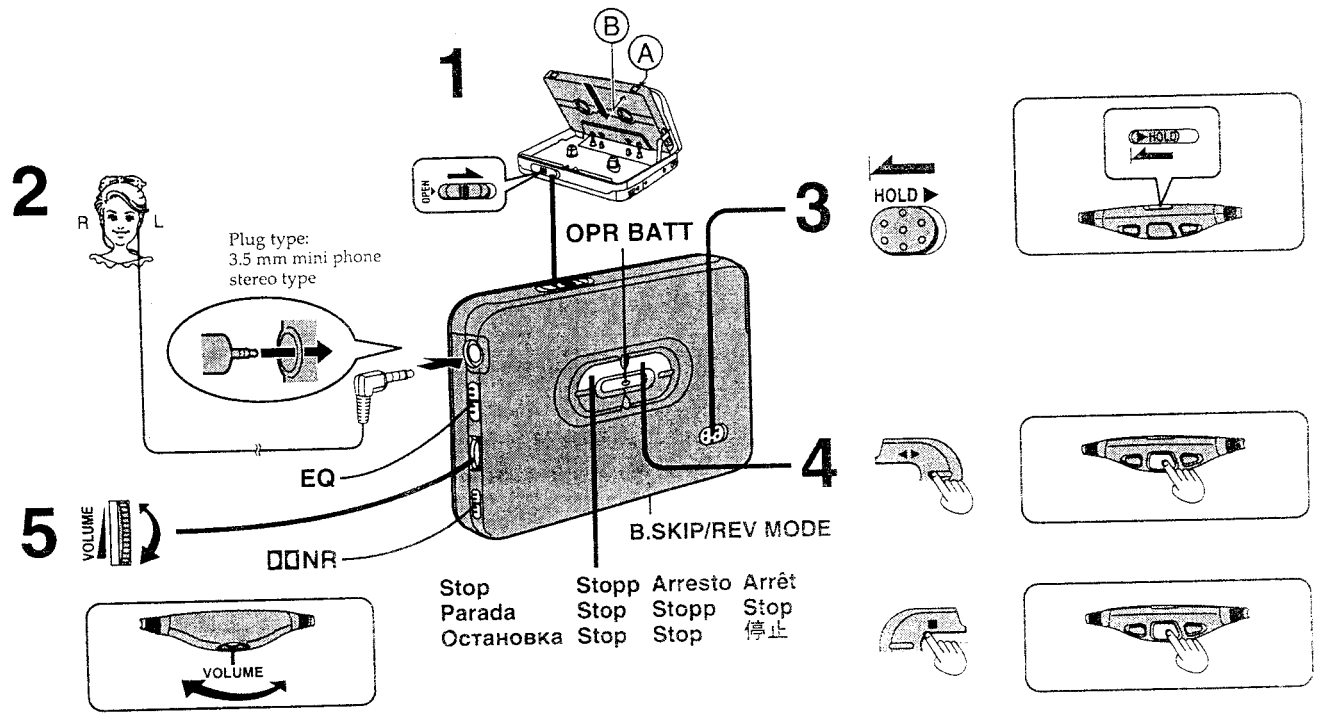
Press. Press and hold.

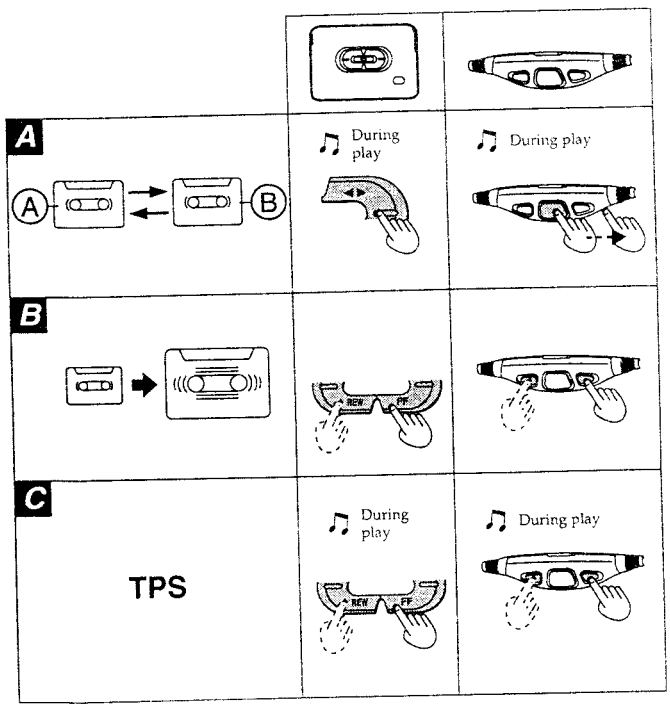
■About the Tone (EQ)

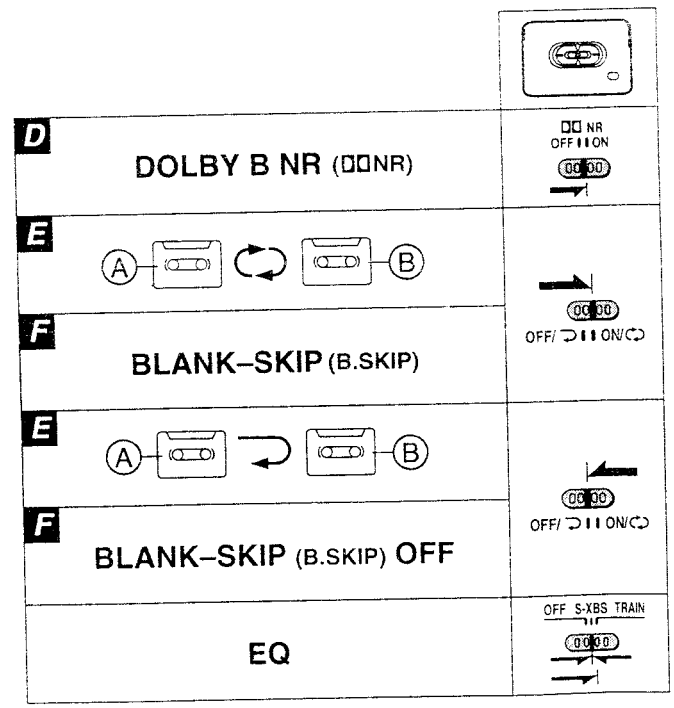
S-XBS: Boosts the low frequency range.

- If the sound distortion occurs, turn down the volume.

TRAIN: Lessens the leaking noisy high sound disturbing people around you.

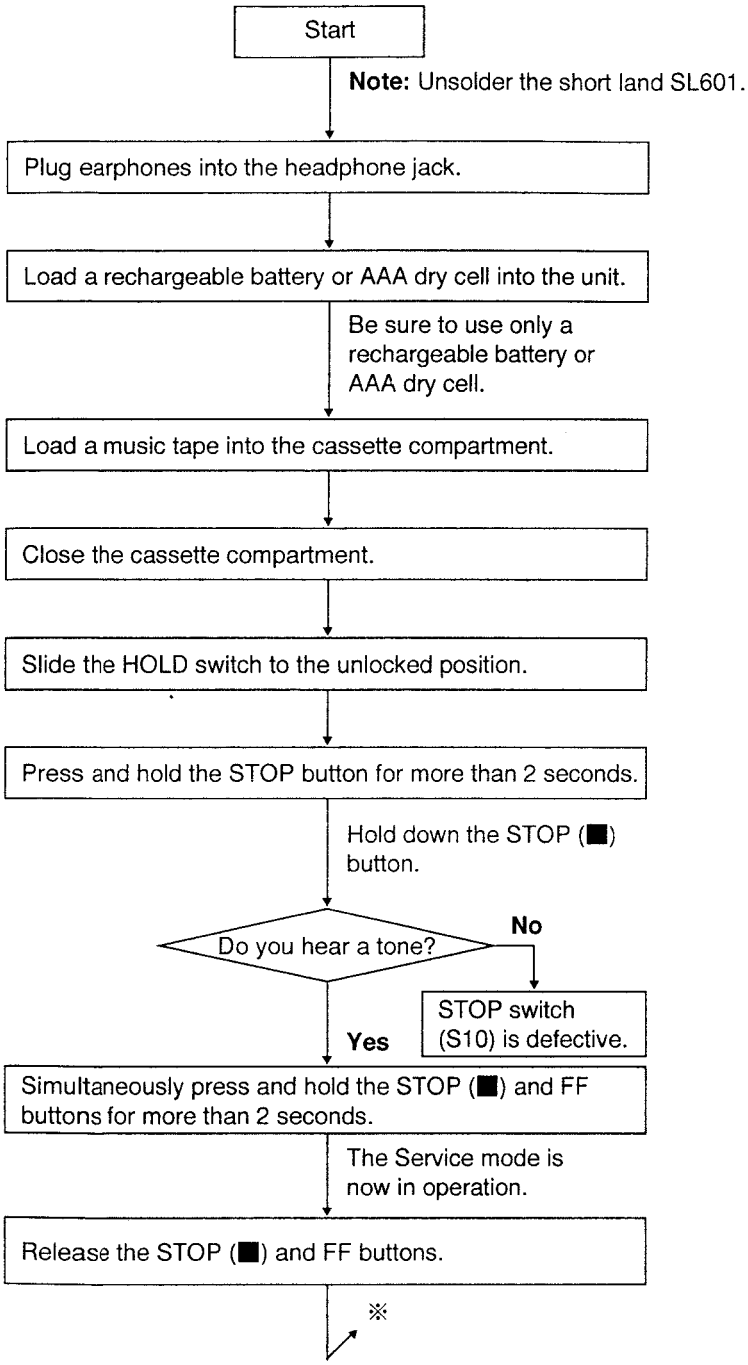


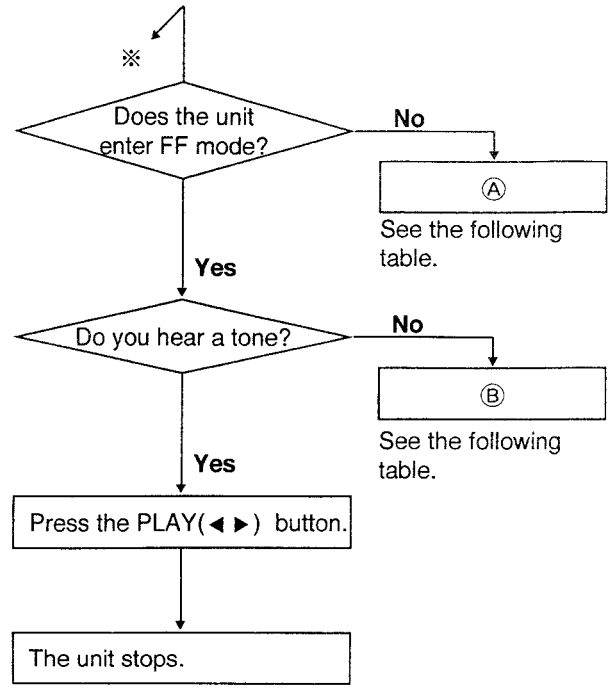




■Service Mode

This model includes a convenient Service mode that can locate failures.
To use this feature, follow the steps described below.


Start
Note: Unsolder the short land SL601.
Plug earphones into the headphone jack.
Load a rechargeable battery or AAA dry cell into the unit.
Be sure to use only a rechargeable battery or AAA dry cell.
Load a music tape into the cassette compartment.
Close the cassette compartment.
Slide the HOLD switch to the unlocked position.
Press and hold the STOP button for more than 2 seconds.
Hold down the STOP (■) button.
Do you hear a tone?
No
STOP switch (S10) is defective.
Yes
Simultaneously press and hold the STOP (■) and FF buttons for more than 2 seconds.
The Service mode is now in operation.
Release the STOP (■) and FF buttons.
※



Note: In the Service mode, the unit continues FF operation until the PLAY(◄ ►) button is pressed. The unit exits the service mode when the PLAY (◄ ►) button is pressed.

CAUSE OF MALFUNCTION

	Problem	Cause
Ⓐ	• The unit does not enter PLAY or REVERSE PLAY mode. • The unit does not enter FF or REW mode.	Switch (S8, S9) is defective. Switch S1 is defective. Motor is defective.
Ⓑ	• No sound. • No sound from either channel when using earphones.	IC1 is defective. IC2 is defective.

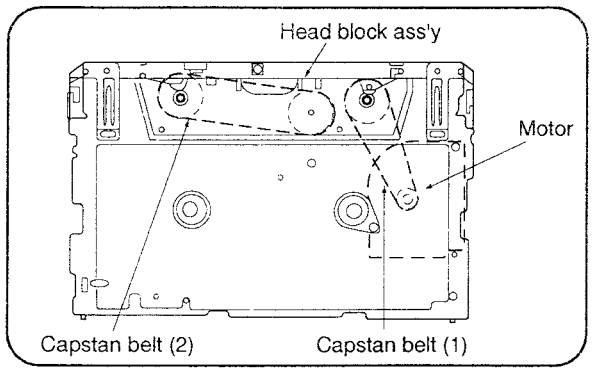
■Mechanism Block Replacement Procedure

• Mechanism block replacement

Repair parts are supplied in the form of a mechanism block ass'y, from which the head block, motor, and capstan belts (1) and (2) are removed.
Before replacing the mechanism block, perform the following steps :

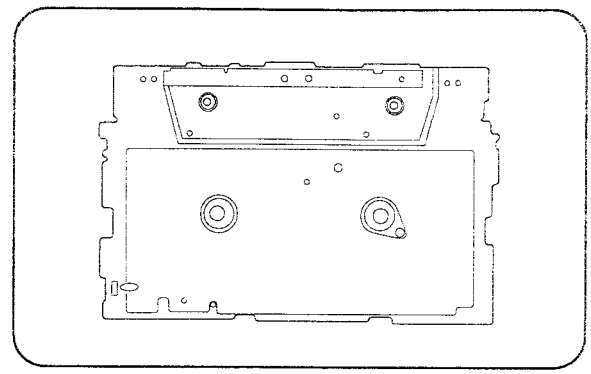
Preparations

Remove the head block, motor, and capstan belts (1) and (2) from the unit, and install them in the mechanism block ass'y (for disassembly, refer to Operation Checks and Main Component Replacement Procedure).



Mechanism block

Fig.1



Mechanism block ass'y

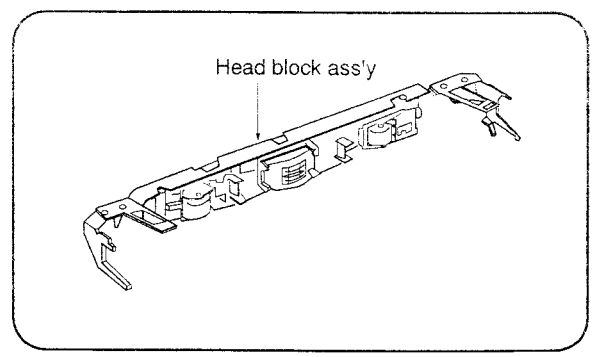
Fig.2

※ **No adjustment is needed after replacement.**

• Head block replacement

Repair parts are supplied in the form of a complete head block ass'y, which includes the head, head arm spring, and pinch roller arms (F) and (R) .
The head arm spring and pinch roller arms can also be supplied separately on request.

※**No head azimuth adjustment is needed.**



Head block ass'y

Fig.3

■ Operation Checks and Main Component Replacement Procedures

NOTE

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **[ ] indicates parts No.**

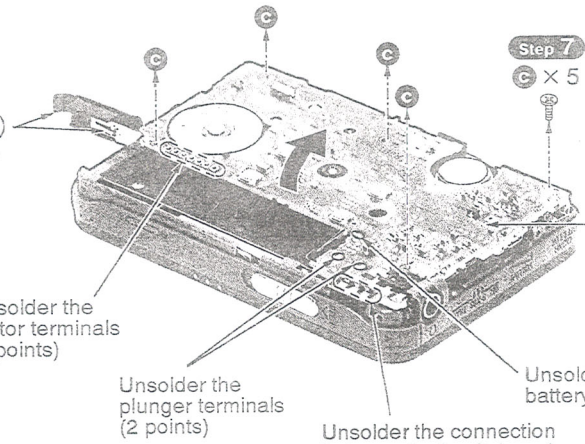
• Contents

Page.

1. Checking for the main P.C.B.. • • •

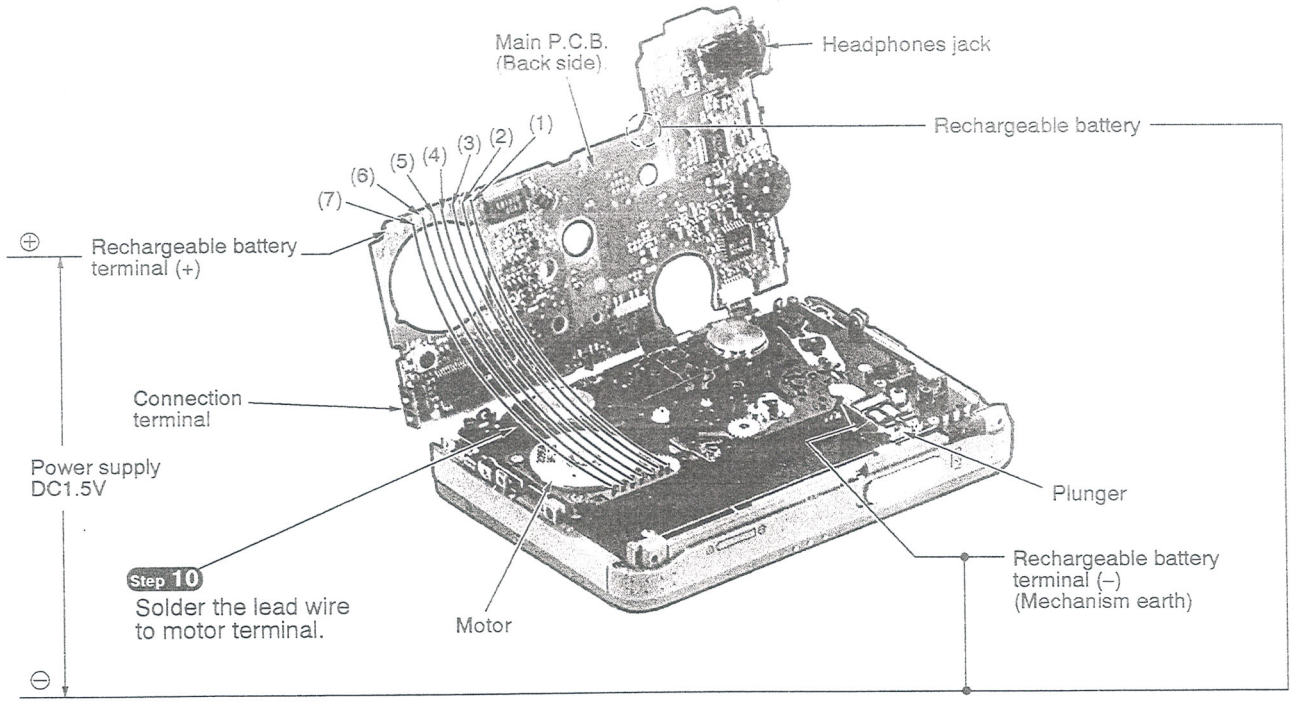
〈Removal for checking the main P.C.B. (Back side)〉

NOTE
When the main P.C.B. is removed, the rechargeable battery terminal (+) and battery cover will also removed.


Step 7
C × 5
Step 9
Remove the main P.C.B..
Unsolder the motor terminals (7 points)
Unsolder the plunger terminals (2 points)
Unsolder the rechargeable battery terminal (–) (1 point)
Unsolder the connection between leaf switch and P.C.B. (3 points)

Step 8
Unsolder each point.

• **Check the main P.C.B. (Back side) as shown below.**

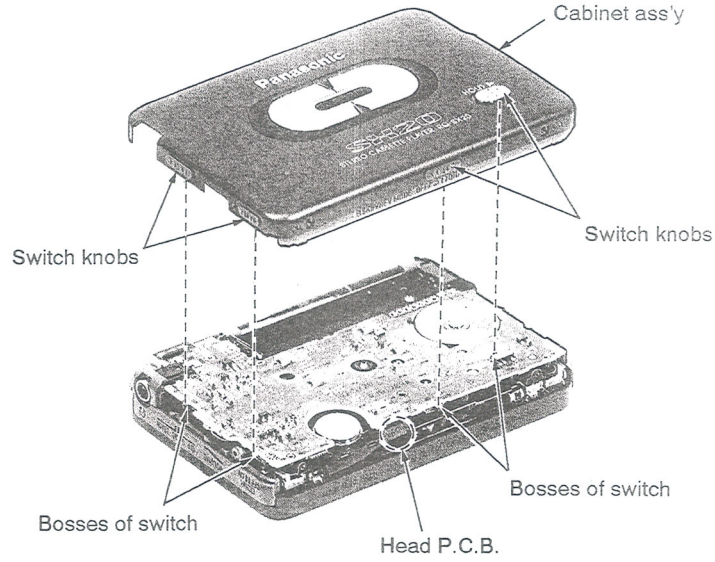


■ Operation Checks

Confirm that the beeper sounds once by headphones when depressing the STOP (■) button more than 2 sec. under above condition, and then depress the STOP (■) and FWD (FF) buttons at same time more than 2 sec..
Keep the finger away from those buttons after that, so the FF mode will be operated.
When the beeper sounds by headphones, depress the PLAY/DIRECTION (◀▶) button, and then that operation will be stopped.

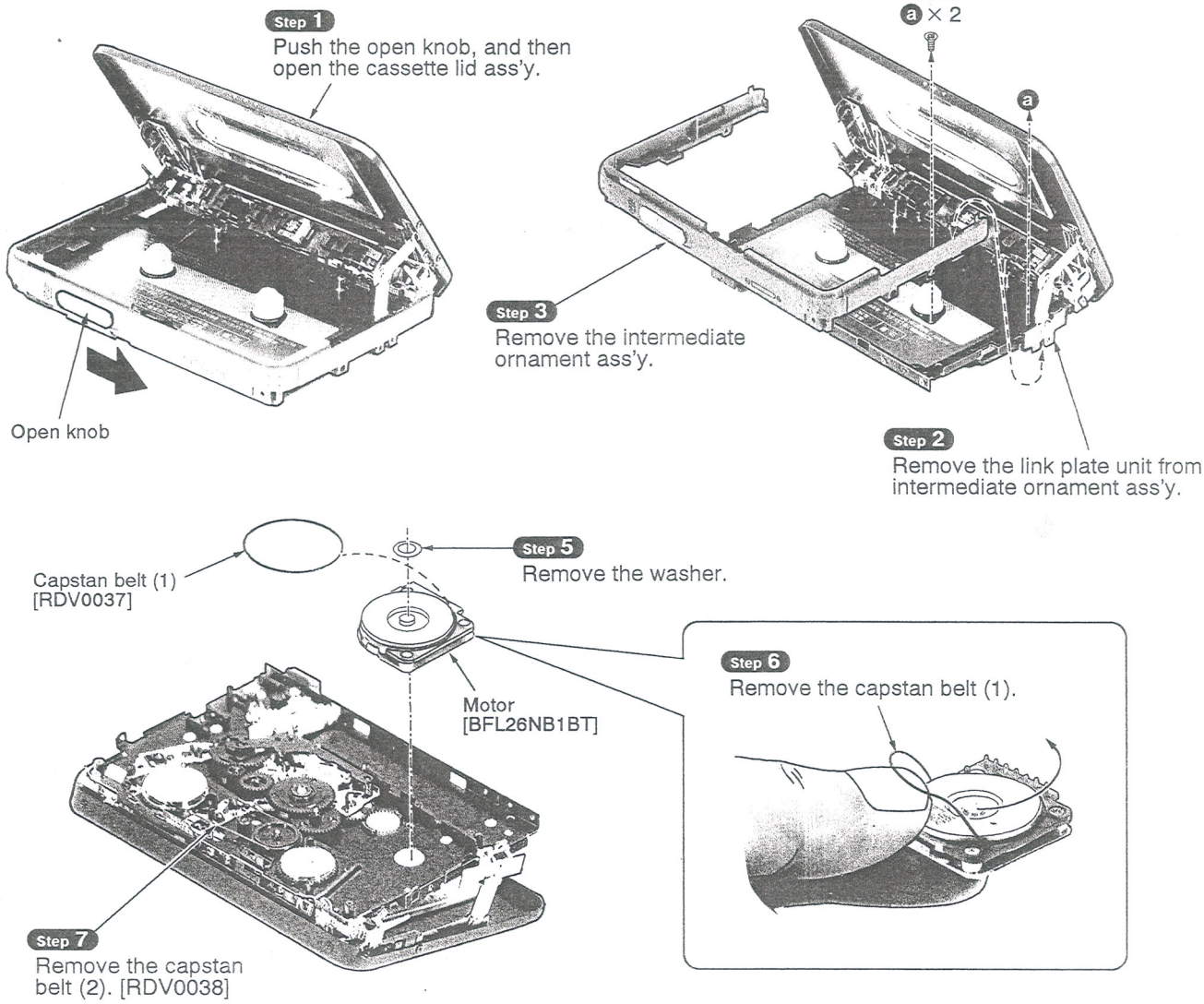
Notice for installing the cabinet ass'y

1. Make sure the bosses of switch are fit in the switch knobs when assembling.
   - DOLBY NR knob : ON
   - B.SKIP/REV MODE knob : ON/⟲
   - S–XBS knob : TRAIN
2. Take care not to put the head P.C.B. between the cabinet ass'y.



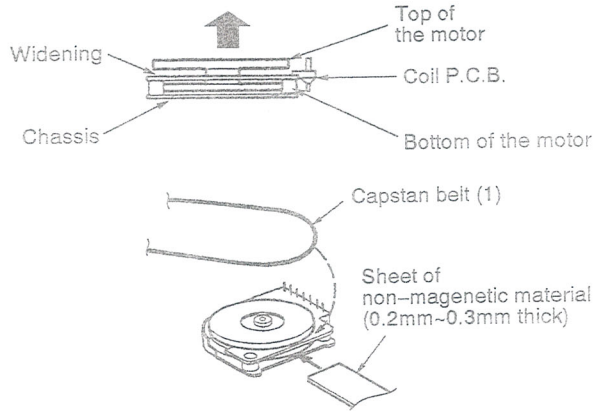
2. Replacement for the motor and capstan belt

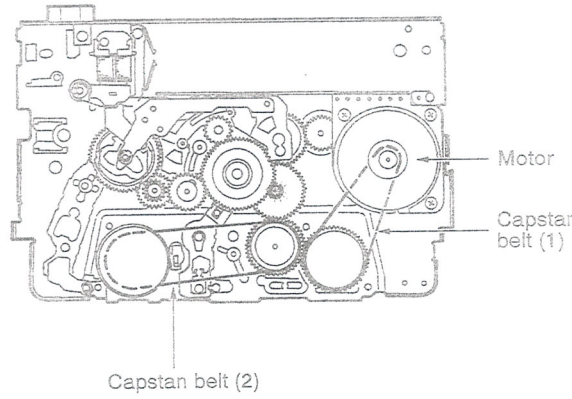
• Follow Step 1 ~ Step 5 , Step 7 ~ Step 9 in item 1 on pages 7 and 8.



Installing the capstan belt (1)

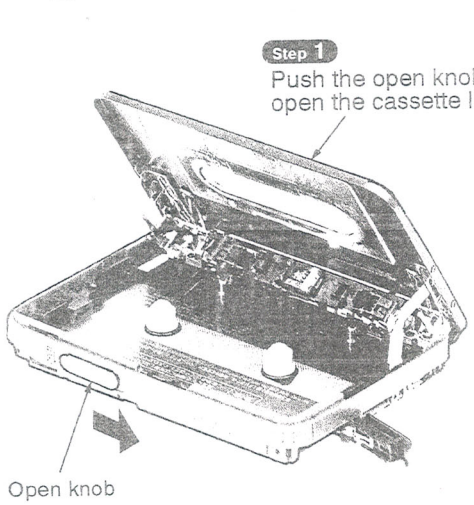
- When install the capstan belt (1) to motor, push up the motor by insert the non–magnetic material sheet between bottom of the motor and the chassis, and install the capstan belt (1) between top of the motor and the coil P.C.B..

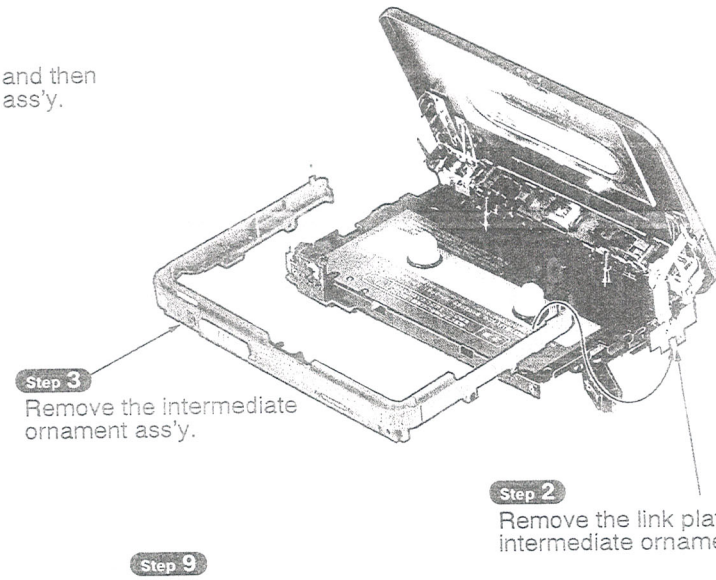


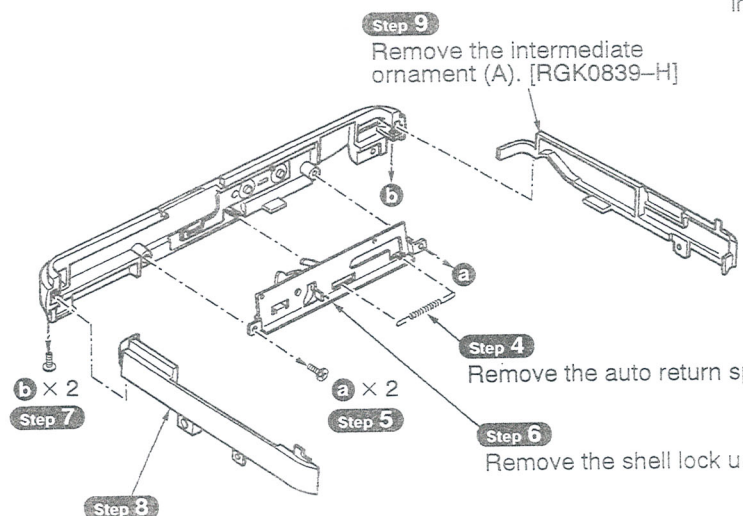


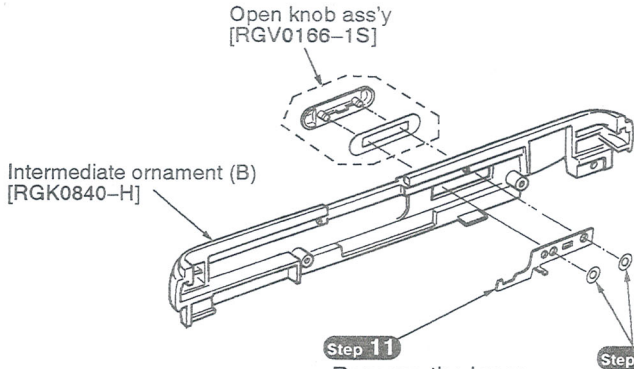
3. Replacement for the intermediate ornament (A), intermediate ornament (B), intermediate ornament (C) and open knob ass'y

- Follow Step 1 ~ Step 5 in item 1 on page 7.





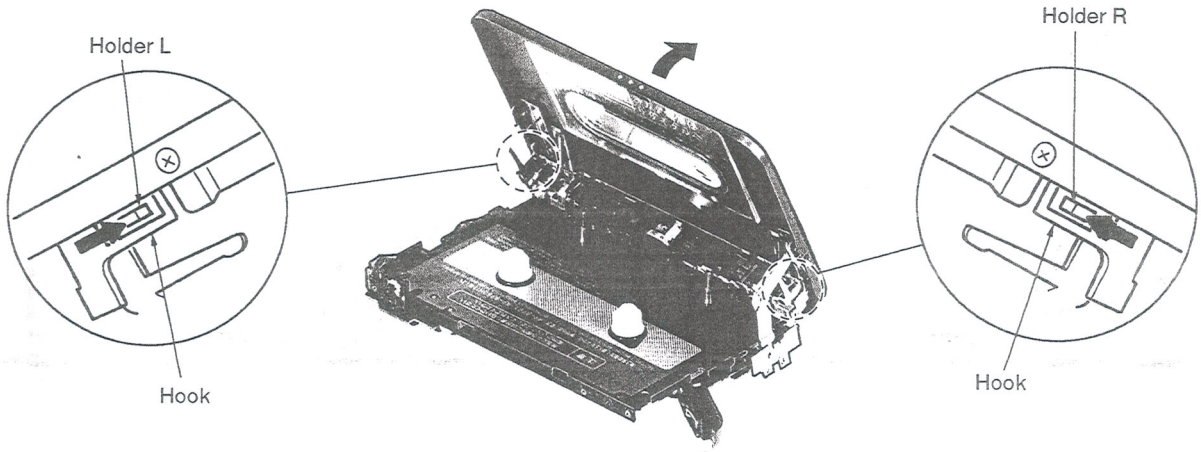


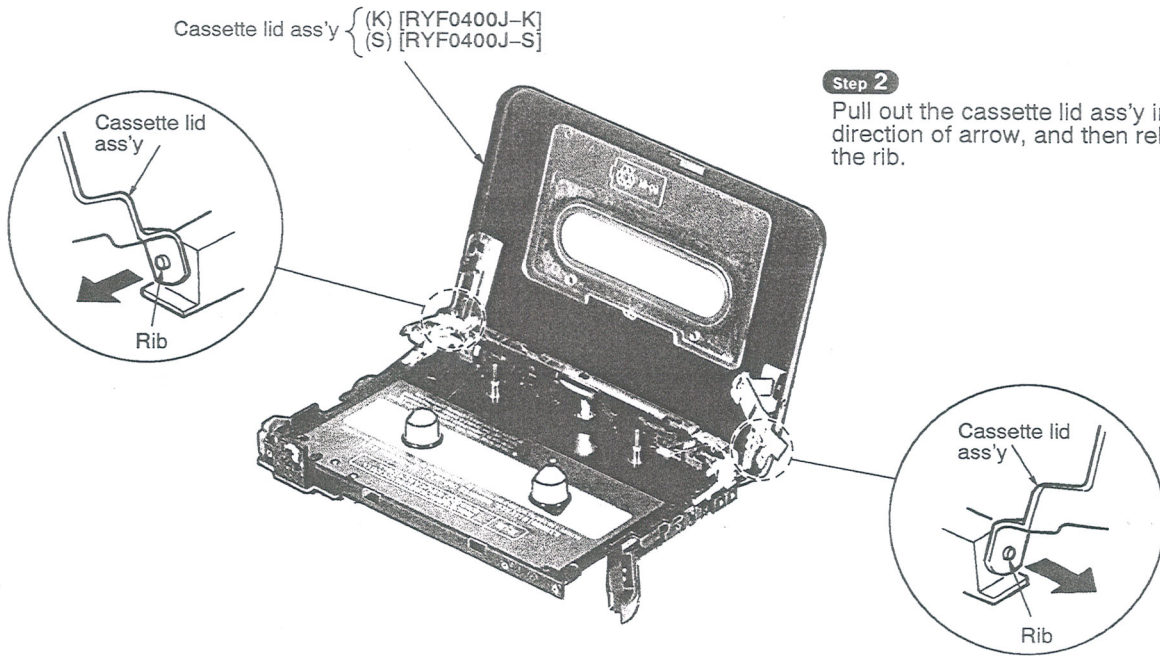


4. Replacement for the head block ass'y

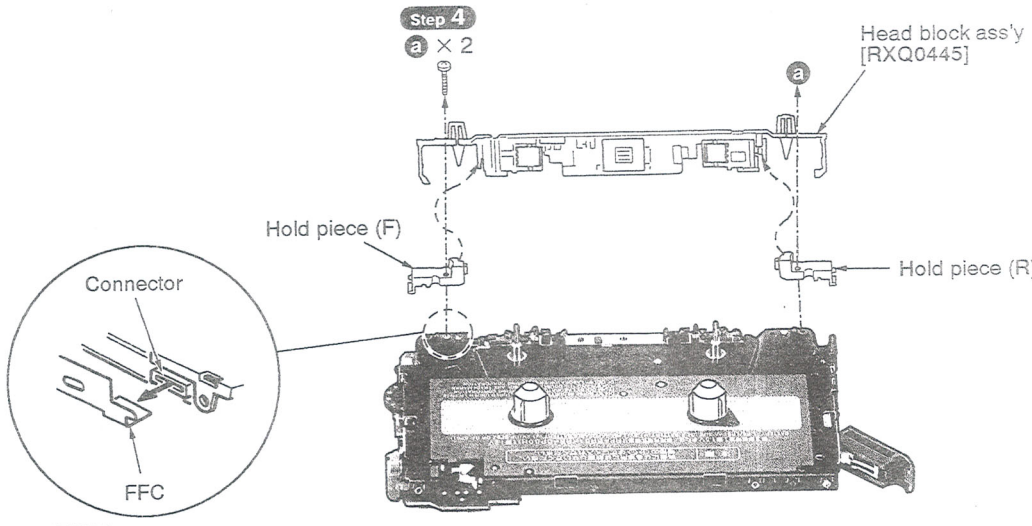
- Follow Step 1 ~ Step 5 in item 1 on page 7.
- Follow Step 1 ~ Step 3 in item 3 on page 10.

Step 1
Force the holders L and R, and then release the hooks.



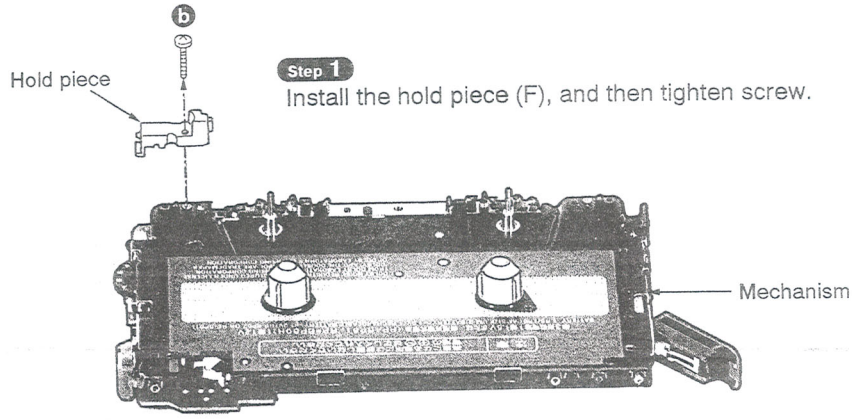


Step 2
Pull out the cassette lid ass'y in the direction of arrow, and then release the rib.

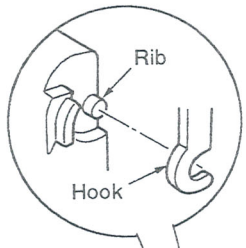


Step 3
Pull out the FFC.

Assembly procedures for head block ass'y after replacement

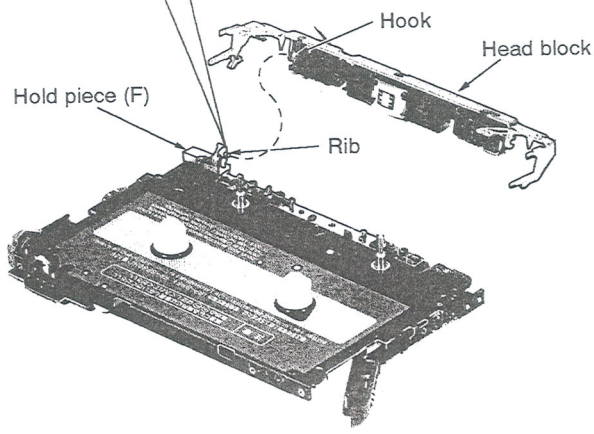


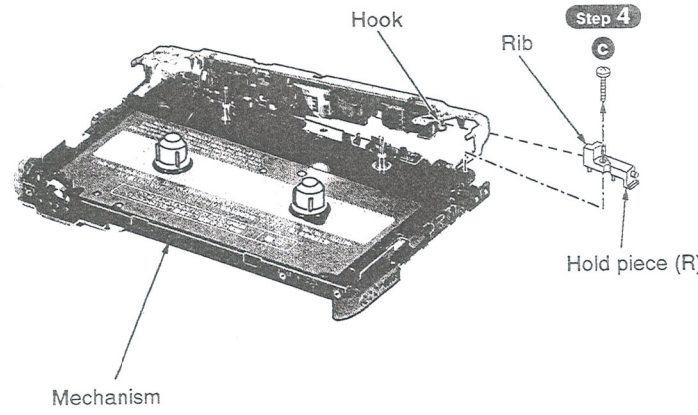
Step 1
Install the hold piece (F), and then tighten screw.



Step 2
Align the hook of head block ass'y with the rib of hold piece (F).

Step 3
Align the hook of head block ass'y with the rib of hold piece (R), and then install the hold piece (R) to the mechanism.





■Measurements and Adjustments

●Adjustment Instructions

READ CAREFULLY BEFORE ATTEMPTING ADJUSTMENTS	
1. Set volume control to maximum.	3. Release the hold state.
2. Set Dolby NR switch to OFF.	4. Set power source voltage to 1.5V DC.

●Control Positions and Equipment Used

1. Frequency counter

●Tape Section

ITEM	TEST TAPE	MEASUREMENT POINT	ADJUSTMENT POINT	PROCEDURE
Tape speed adjustment	QZZCWAT (3 kHz, −10 dB)	Connect the frequency counter to headphones jack (30 Ω) (Refer to Fig.1)	VR2 (Refer to Fig.2)	Playback the central part of the tape and adjust VR2 so that the tape speed is as follows. Forward: 3020 ± 20 Hz Reverse: 2970 ~ 3080 Hz Make sure that the frequency range in within ±60 Hz for between "Forward" and "Reverse" mode.

Note: The Playback head is supplied on the head arm assembly. (See the Mechanism parts Location on page 22.)
The assembly requires no adjustment

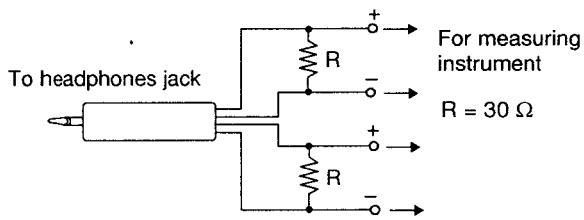


Fig.1

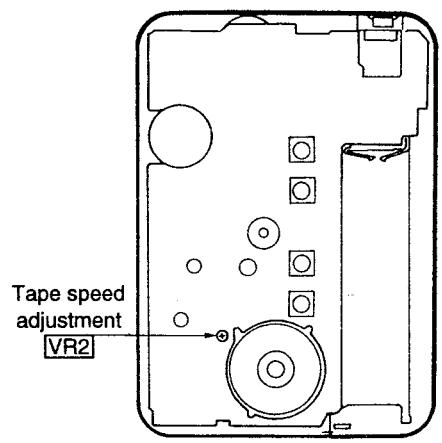
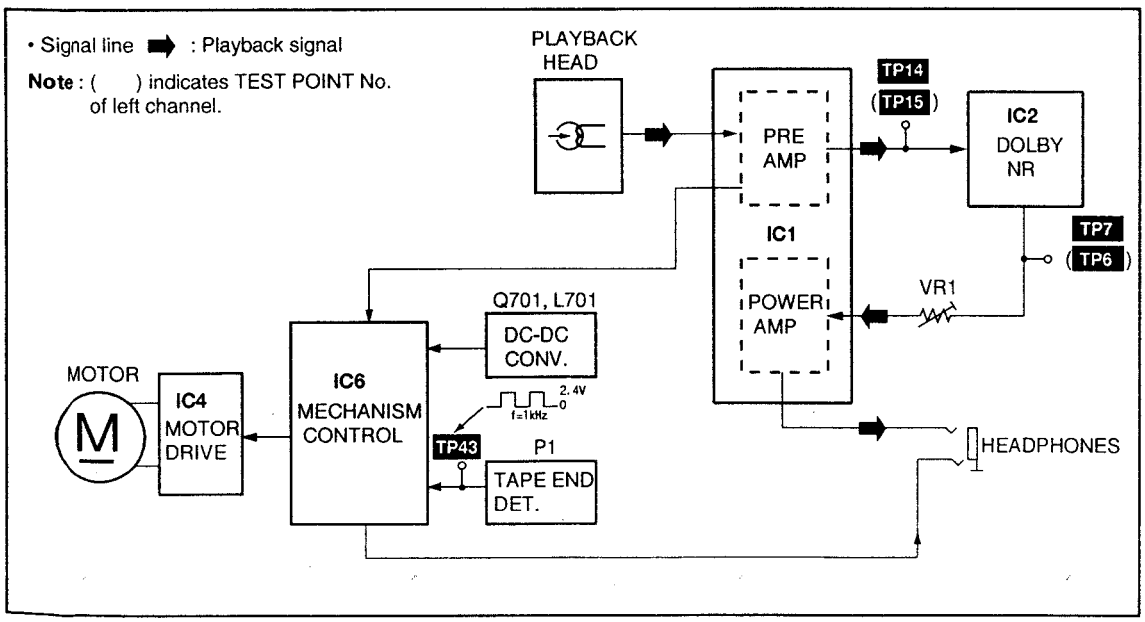
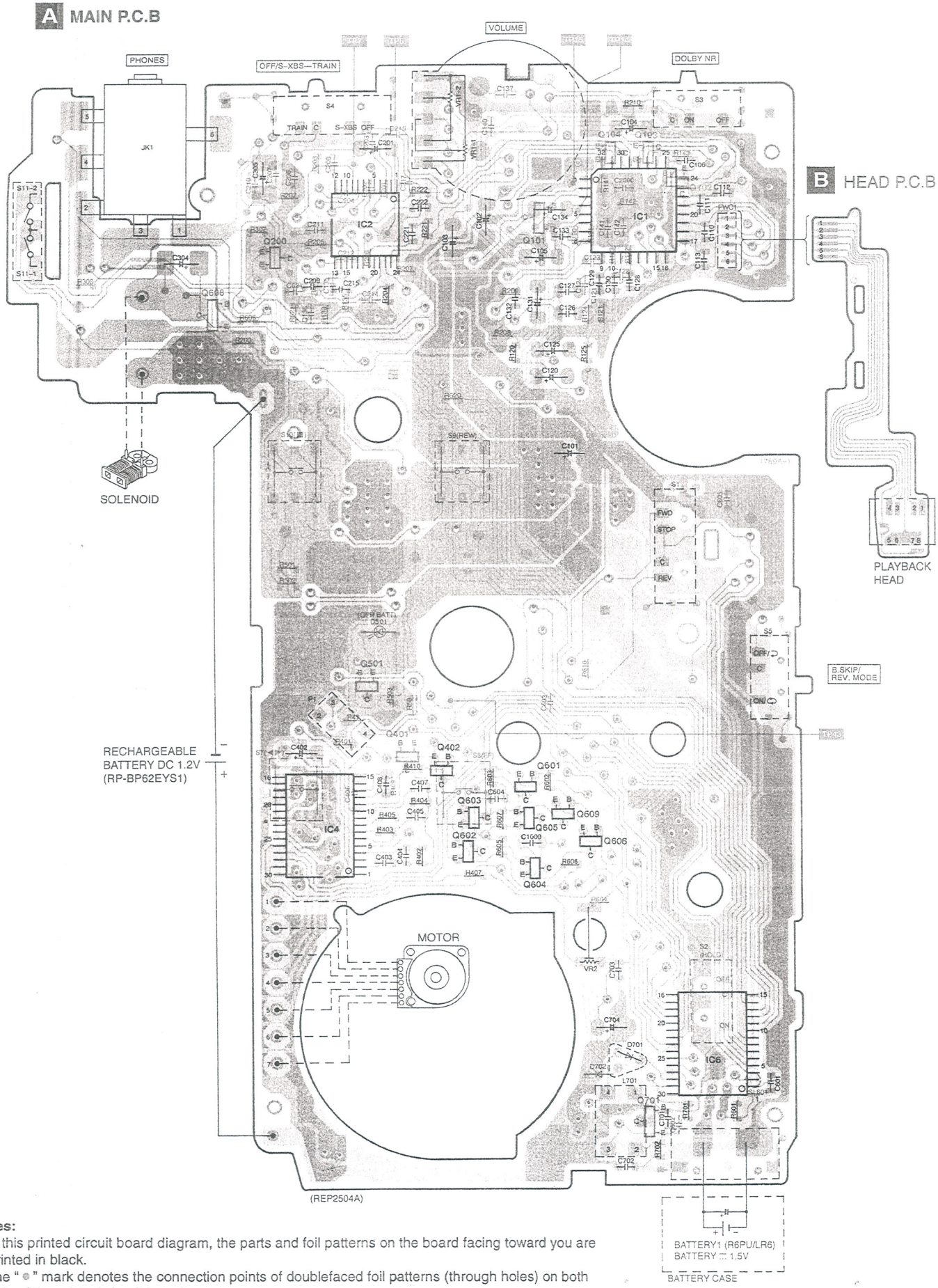


Fig.2

■Block Diagram



■Printed Circuit Board Diagram and Wiring Connection Diagram



Notes:

- In this printed circuit board diagram, the parts and foil patterns on the board facing toward you are printed in black.
- The " ● " mark denotes the connection points of doublefaced foil patterns (through holes) on both side of the printed circuit board.
- This printed circuit board diagram may be modified at any time with the development of new technology.

■Schematic Diagram (See parts list on page 20.)

(This schematic diagram may be modified at any time with development of new technology.)

Notes:

- **S1** : FWD/REV switch in "FWD" position.
- **S2** : HOLD (HOLD) switch in "ON" position.
- **S3** : Dolby noise reduction (DNR) switch in "OFF" position.
- **S4** : Tone select (OFF/S-XBS/TRAIN) switch in "OFF" position.
- **S5** : B.S. OFF/ON, ⮌/⟲(BLANK SKIP, REVERSE MODE) switch in "⟲" position. (ON: ⮌, OFF: ⟲)
- **S11-1** : Tape IN/OUT det. switch in "OUT(OFF)" position. [IN(ON)...Tape in, OUT(OFF)...Tape out]
- **S11-2** : Tape detector (METAL/NORMAL) switch in "OFF(METAL)" position. [ON: NORMAL, OFF: METAL]
- **S7** : Play (◀▶) switch.
- **S8** : Fast forward (FF) switch.
- **S9** : Rewind (REW) switch.
- **S10** : Stop (■) switch.
- **VR1-1,2** : Volume adjustment.
- **VR2** : Tape speed adjustment.

- DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
  No mark...Playback
  Volume VR MAX... 61mA
  MIN 61mA

- Signal line
  ⟶ : +B line, ➡ : Playback signal

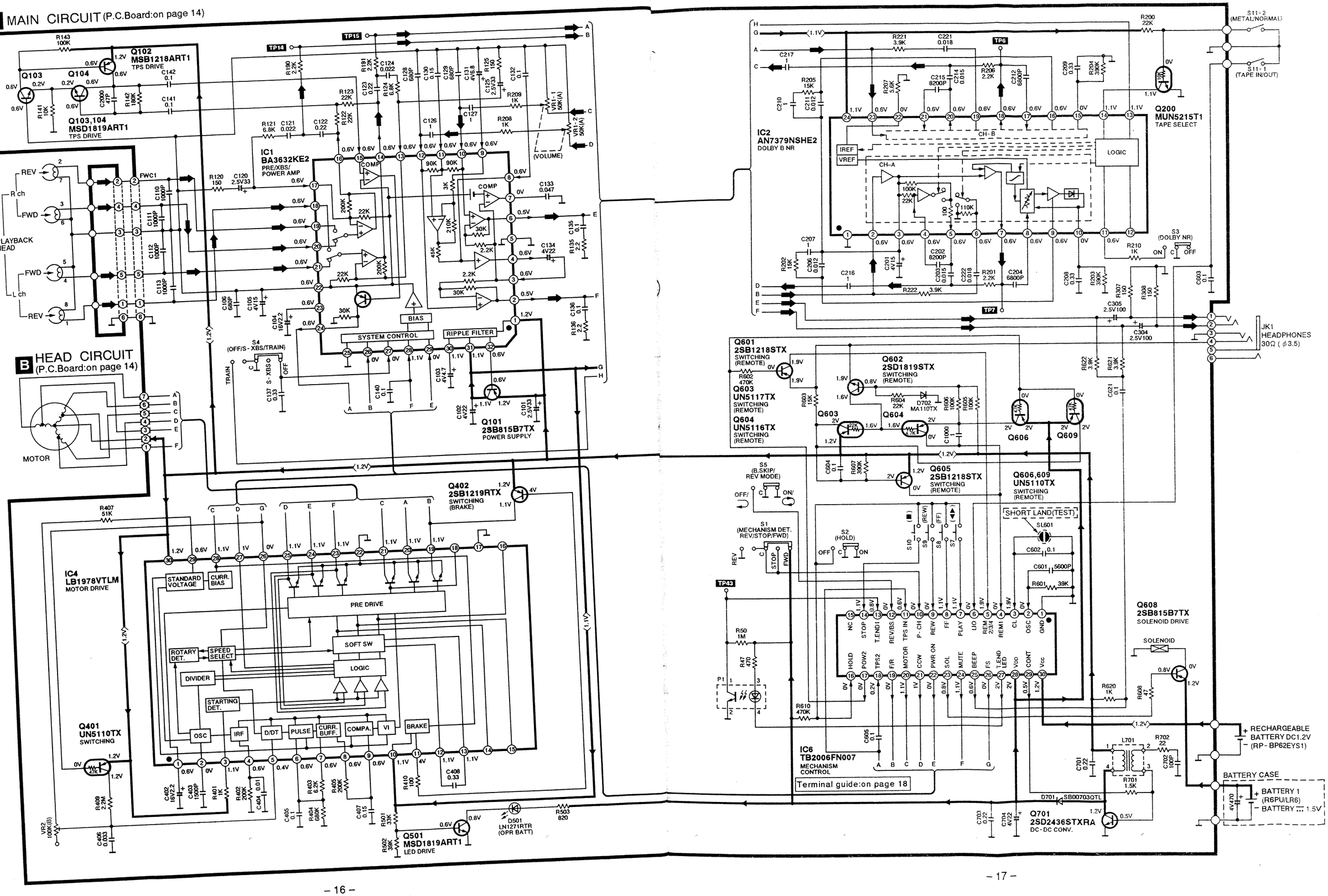
■Check Point of Signal

CHECK ITEM			TEST POINT
HEAD → PRE OUTPUT		Lch	TP15
		Rch	TP14
		COM	HP TERMINAL
PRE OUTPUT → DOLBY NR OUTPUT		Lch	TP6
		Rch	TP7
		COM	HP TERMINAL
DOLBY NR OUTPUT → VR INPUT		Lch	VR TERMINAL
		Rch	VR TERMINAL
		COM	VR TERMINAL
VR INPUT → VR OUTPUT		Lch	VR TERMINAL
		Rch	VR TERMINAL
		COM	VR TERMINAL
POWER AMP OUTPUT → HEADPHONES OUTPUT		Lch	HP TERMINAL
		Rch	HP TERMINAL
		COM	HP TERMINAL
PHOTO COUPLER (END)		PULSE OUTPUT	TP43

RQ-SX20

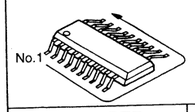
A MAIN CIRCUIT (P.C.Board:on page 14)

B HEAD CIRCUIT (P.C.Board:on page 14)

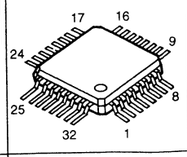


■Type Illustration of IC's, Transistors and Diodes

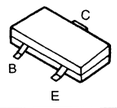
AN7379NSHE2	24PIN
LB1978VTLM	30PIN
TB2006FN007	30PIN



BA3632KE2

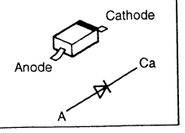


2SB1218STX
2SB1219RTX
2SB815B7TX

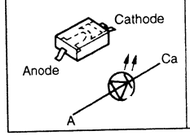


2SD1819STX
2SD2436STXRA
MSB1218ART1
MSD1819ART1
MUN5215T1
UN5110TX
UN5116TX
UN5117TX

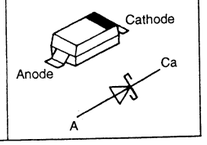
MA110TX



LN1271RTR



SB00703QTL



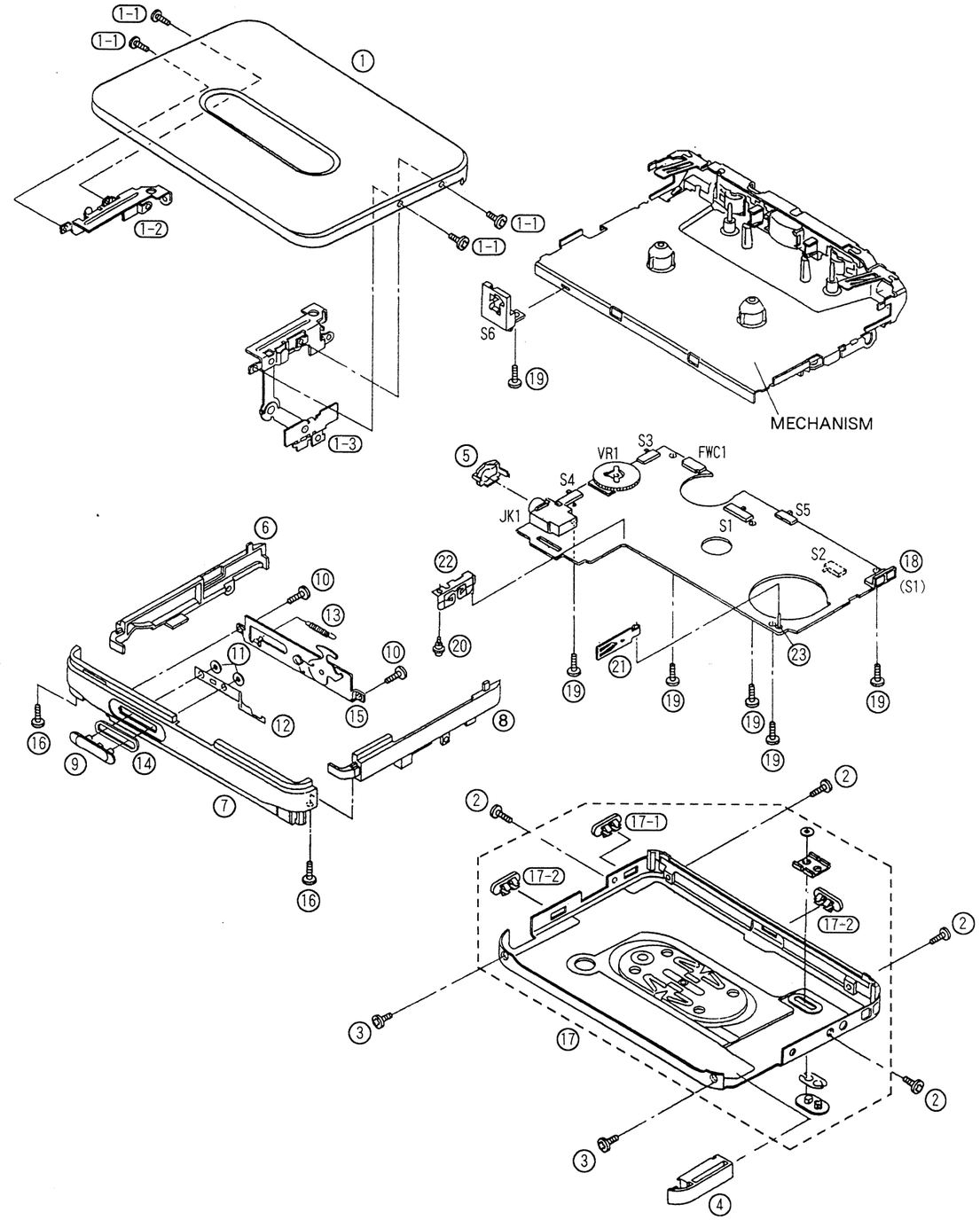
■Terminal Function of IC's

• IC6 (TB2006FN007): Mechanism control

Pin No.	Mark	I/O Division	Function
1	GND	—	GND terminal
2	OSC	I	System clock OSC input terminal
3	CL	I	Clear input terminal
4 · 5	REM1~4	I	Remote control signal input terminal
6	LID	I	Inputs the signal that detects whether the cassette tape is inserted. "L": the tape is inserted.
7	PLAY	I	Key switch input terminal ("L": PLAY)
8	FF	I	Key switch input terminal ("L": FF)
9	REW	I	Key switch input terminal ("L": REW)
10	P-CH	I	Inputs the mechanism status detection signal ("H": FWD, "L": REV)
11	TPS IN	I	TPS control signal input terminal
12	REV/ BS	I	Blank skip/ reverse mode select input terminal ("H": ON/ ⇄, "L": OFF/ ⇄)
13	T. END1	I	Inputs the signal for the detection of tape rotation. When the pulse signal is input: The current mode remains set as the tape is rotating. No pulse signal: Stops or starts reverse playback as the tape has stopped rotating.
14	STOP	I	Key switch input terminal ("L": STOP)

Pin No.	Mark	I/O Division	Function
15	NC	—	Not connected
16	HOLD	I	Tape A/B side detection input terminal
17	POW-2	O	Power control output terminal
18	TPS2	I	TPS control signal input terminal
19	F/ R	O	FWD/ REV select output terminal ("L": REV)
20	MOTOR	O	Motor speed up signal output terminal
21	CCW	O	Reversing motor drive control signal output terminal
22	PWR ON	O	Power switch ON signal output terminal
23	SOL	O	Playback solenoid drive signal output terminal
24	MUTE	O	Muting signal output terminal ("L": Muting)
25	BEEP	O	Confirmation beep output of remote control operation
26	FS	O	Motor speed up signal output terminal
27	T.END LED	O	Tape rotation read control output terminal
28	VDD	I	Power supply terminal
29	CONT	O	DC-DC converter control output terminal
30	VCC	I	Power supply terminal

■Cabinet Parts Location



■ Replacement Parts List (Electrical)

Notes: *Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
*The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.)
Parts without these indications can be used for all areas.
*[M] Indicates in Remarks columns parts that are supplied by MESA.
*(K)...For Black Type (S)...For Silver Type

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC1	BA3632KE2	IC	[M]
IC2	AN7379NSHE2	IC	[M]
IC4	LB1978VTLM	IC	[M]
IC6	TB2006FN007	IC	[M]
		TRANSISTOR(S)	
Q101	2SB815B7TX	TRANSISTOR	[M]
Q102	MSB1218ART1	TRANSISTOR	[M]
Q103, 104	MSD1819ART1	TRANSISTOR	[M]
Q200	MUN5215T1	TRANSISTOR	[M]
Q401	UN5110TX	TRANSISTOR	[M]
Q402	2SB1219RTX	TRANSISTOR	[M]
Q501	MSD1819ART1	TRANSISTOR	[M]
Q601	2SB1218STX	TRANSISTOR	[M]
Q602	2SD1819STX	TRANSISTOR	[M]
Q603	UN5117TX	TRANSISTOR	[M]
Q604	UN5116TX	TRANSISTOR	[M]
Q605	2SB1218STX	TRANSISTOR	[M]
Q606	UN5110TX	TRANSISTOR	[M]
Q608	2SB815B7TX	TRANSISTOR	[M]
Q609	UN5110TX	TRANSISTOR	[M]
Q701	2SD2436STXRA	TRANSISTOR	[M]
		DIODE(S)	
D501	LN1271RTR	DIODE	[M]
D701	SB00703QTL	DIODE	[M]
D702	MA110TX	DIODE	[M]
		VARIABLE RESISTOR(S)	
VR1	EVUT0VA05A54	V. R	[M]
VR2	RRN3A07B15WL	V. R	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		COIL(S)	
L701	RL09U025T-T	COIL	[M]
		CONNECTOR(S)	
FWC1	RJS2A1606T	CONNECTOR(6P)	[M]
		PHOTO COUPLER(S)	
P1	CNB1002001AU	PHOTO COUPLER	[M]
		SWITCH(ES)	
S1	RSS2A012-1A	SW	[M]
S2, 3	RSS2A010-1A	SW	[M]
S4	RSS3A007-1A	SW	[M]
S5	RSS2A010-1A	SW	[M]
S7-9	EVQPLMA15	SW	[M]
S10	EVQPLMA15	SW	[M]
S11	RSH1B011-1U	SW	[M]
		JACK(S)	
JK1	RJJ35TK05-C	HEADPHONES	[M]
		MAIN P. C. B. ASS'Y	
PCB1	REP2504A	MAIN P. C. B. ASS'Y	[M] (RTL)

- The marking (RTL) indicates that the Retention Time is limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention, After the end of this period, the assembly will no longer be available.

■Resistors and Capacitors

Notes : * Capacity valuse are in microfarads (uF) unless specified otherwise, P=Pico-farads(pF) F=Farads(F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000(OHM) , 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R47	ERJ3GEYJ471V	1/16W 470 [M]
R50	ERJ3GEYJ105V	1/16W 1.5M [M]
R120	ERJ3GEYJ151V	1/16W 150 [M]
R121	ERJ3GEYJ682V	1/16W 6.8K [M]
R122, 123	ERJ3GEYJ223V	1/16W 22K [M]
R124	ERJ3GEYJ682V	1/16W 6.8K [M]
R125	ERJ3GEYJ151V	1/16W 150 [M]
R135, 136	ERJ3GEYJ2R2V	3W 2.2 [M]
R141	ERJ3GEYJ103V	1/16W 10K [M]
R142	ERJ3GEYJ184V	3W 180K [M]
R143	ERJ3GEYJ104V	1/16W 100K [M]
R190, 191	ERJ3GEYJ222V	1/16W 2.2K [M]
R200	ERJ3GEYJ223V	1/16W 22K [M]
R201	ERJ3GEYJ222V	1/16W 2.2K [M]
R202	ERJ3GEYJ153V	1/16W 15K [M]
R203, 204	ERJ3GEYJ394V	1/16W 390K [M]
R205	ERJ3GEYJ153V	1/16W 15K [M]
R206	ERJ3GEYJ222V	1/16W 2.2K [M]
R207	ERJ3GEYJ562V	1/16W 5.6K [M]
R208-210	ERJ3GEYJ102V	1/16W 1K [M]
R221, 222	ERJ3GEYJ392V	1/16W 3.9K [M]
R307, 308	ERJ3GEYJ151V	1/16W 150 [M]
R401	ERJ3GEYJ102V	1/16W 1K [M]
R402	ERJ3GEYD204V	3W 200K [M]
R403	ERJ3GEYJ622V	3W 6.2K [M]
R404	ERJ3GEYJ684V	3W 680K [M]
R405	ERJ3GEYD204V	3W 200K [M]
R407	ERJ3GEYJ513V	3W 51K [M]
R409	ERJ3GEYJ225V	3W 2.2M [M]
R410	ERJ3GEYJ101V	1/16W 100 [M]
R501	ERJ3GEYJ333V	1/16W 33K [M]
R502	ERJ3GEYJ393V	1/16W 39K [M]
R503	ERJ3GEYJ821V	3W 820 [M]
R601	ERJ3GEYD393V	3W 39K [M]
R602	ERJ3GEYJ474V	1/16W 470K [M]
R603	ERJ3GEYJ153V	1/16W 15K [M]
R604	ERJ3GEYJ223V	1/16W 22K [M]
R605, 606	ERJ3GEYJ104V	1/16W 100K [M]
R607	ERJ3GEYJ394V	1/16W 390K [M]
R608	ERJ3GEYJ470V	1/16W 47 [M]
R610	ERJ3GEYJ474V	1/16W 470K [M]
R620	ERJ3GEYJ102V	1/16W 1K [M]
R621, 622	ERJ3GEYJ392V	1/16W 3.9K [M]
R701	ERJ3GEYJ152V	3W 1.5K [M]
R702	ERJ3GEYJ220V	1/16W 22 [M]

Ref. No.	Part No.	Values & Remarks
		CAPACITORS
C101	ECST0EY336RR	2.5V 33U [M]
C102	RCSX0GY226RE	4V 22U [M]
C103	RCST0GY475RG	4V 4.7U [M]
C104	RCST1CY225RG	16V 2.2U [M]
C105	RCSX0GY156RE	4V 15U [M]
C106	ECUV1H681KBV	50V 680P [M]
C110-113	ECUV1H102KBV	50V 1000P [M]
C120	RCST0EY336RG	2.5V 33U [M]
C121	ECUV1C223KBV	16V 0.022U [M]
C122, 123	ECUV1C224ZFV	16V 0.22U [M]
C124	ECUV1C223KBV	16V 0.022U [M]
C125	RCST0EY336RG	2.5V 33U [M]
C126, 127	ECUVNC105ZFN	16V 1U [M]
C128, 129	ECUV1H681KBV	50V 680P [M]
C130	ECUV1A154KBV	10V 0.15U [M]
C131	RCST0GY685RG	4V 6.8U [M]
C132	ECUV1C104KBV	16V 0.1U [M]
C133	ECUVNC473KBV	16V 0.047U [M]
C134	RCSX0GY226RE	4V 22U [M]
C135, 136	ECUV1C104KBV	16V 0.1U [M]
C137	ECUVNC334ZFV	16V 0.33U [M]
C140-142	ECUVNC104ZFV	16V 0.1U [M]
C201	RCSX0GY156RE	4V 15U [M]
C202	ECUV1H822KBV	50V 8200P [M]
C203	ECUVNE153KBV	25V 0.015U [M]
C204	ECUVNH682KBV	50V 6800P [M]
C206	ECUVNE123KBV	25V 0.012U [M]
C207	ECUVNC105ZFN	16V 1U [M]
C208, 209	ECUVNC334ZFV	16V 0.33U [M]
C210	ECUVNC105ZFN	16V 1U [M]
C211	ECUVNE123KBV	25V 0.012U [M]
C212	ECUVNH682KBV	50V 6800P [M]
C214	ECUVNE153KBV	25V 0.015U [M]
C215	ECUV1H822KBV	50V 8200P [M]
C216, 217	ECUVNC105ZFN	16V 1U [M]
C221, 222	ECUVNE183KBV	25V 0.018U [M]
C304, 305	ECST0EX107RR	2.5V 100U [M]
C402	RCST1CY225RG	16V 2.2U [M]
C403	ECUV1H152KBV	50V 1500P [M]
C404	ECUVNH103KBV	50V 0.01U [M]
C405	ECUV1C104KBV	16V 0.1U [M]
C406	ECHU1C333GB5	16V 0.033U [M]
C407	ECUV1A154KBV	10V 0.15U [M]
C408	ECUVNC334KBN	16V 0.33U [M]
C601	ECUVNH562KBV	50V 5600P [M]
C602	ECUV1C104KBV	16V 0.1U [M]
C603-605	ECUVNC104ZFV	16V 0.1U [M]

Ref. No.	Part No.	Values & Remarks
C621	ECUVNC104ZFV	16V 0.1U [M]
C701	ECUV1C224ZFV	16V 0.22U [M]
C702	ECUV1H101JCV	50V 100P [M]
C703	ECUV1C224ZFV	16V 0.22U [M]
C704	RCSX0GY226RE	4V 22U [M]
C1000	ECUVNC105ZFN	16V 1U [M]
C2000	ECUV1H470KCV	50V 47P [M]

■Replacement Parts List (Mechanism)

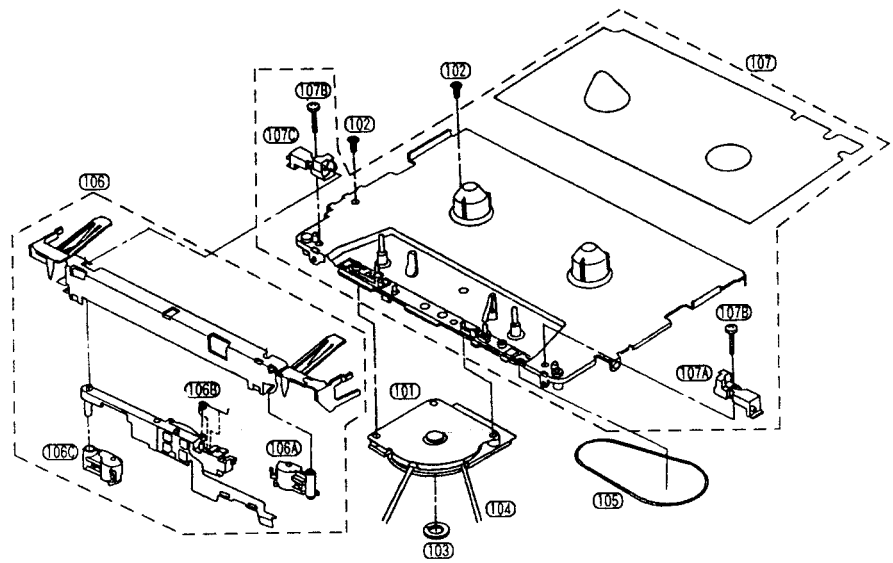
Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS	
101	BFL26NB1BT	MOTOR	[M]
102	XQS14+A2FZ	SCREW	[M]
103	RHW40002	WASHER	[M]
104	RDV0037	CAPSTAN BELT(1)	[M]
105	RDV0038	CAPSTAN BELT(2)	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
106	RXQ0445	HEAD BLOCK ASS'Y	[M]
106A	RXL0130	PINCH ROLLER ARM (F)	[M]
106B	RME0187-1	HEAD ARM SPRING	[M]
106C	RXL0131	PINCH ROLLER ARM (R)	[M]
107	RFKRQSX60-K	MECHANISM BLOCK ASS'Y	[M]
107A	RMQ0547	HOLD PIECE (F)	[M]
107B	RHD14047	SCREW	[M]
107C	RMQ0548	HOLE PIECE (R)	[M]

■Mechanism Parts Location

	FWD & REV mode
Wow and flutter	0.3 % (WRMS)
Pressure of pinch roller	110±10 g
Take-up tension	More than 60 g
Playback torque	20±5 g
FF/REW torque	More than 60 g · cm

The parts enclosed in the dotted boxes are supplied as a block assembly. Therefore, they are not supplied separately except parts indicated with Ref. No.



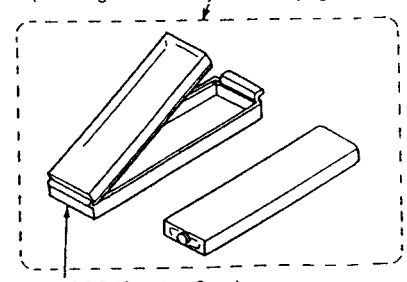
■Supply of Rechargeable Battery as Replacement Parts

Please take note of the following points relating to Carrying Case to be used for protection of Rechargeable Battery from shorting.

Replacement Parts:

- **Rechargeable Battery (RP-BP62EYS1) to be supplied will be provided with Carrying Case (RFA0475-Q).**
- No replacement parts will be supplied for Rechargeable Battery without Carrying Case.
- Replacement parts will be supplied for Carrying Case (RFA0475-Q) without Rechargeable Battery.
- To your customers, delivery Rechargeable Battery together with Carrying Case to prevent shorting accidents that may occur when Rechargeable Battery is carried about without Carrying Case.

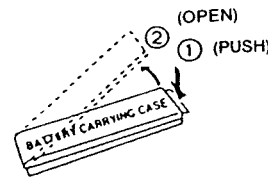
RP-BP62EYS1
(Rechargeable Battery with Carrying Case)



RFA0475-Q (Carrying Case)

■Caution in use of Rechargeable Battery

- Take Rechargeable Battery out of Carrying Case and use it.
- Be sure to carry Rechargeable Battery in this Carrying Case. If not, it may either heat or ignite by shorting with a metal.



■Replacement Parts List (Cabinet, Packing, Accessory, Jig/Tool)

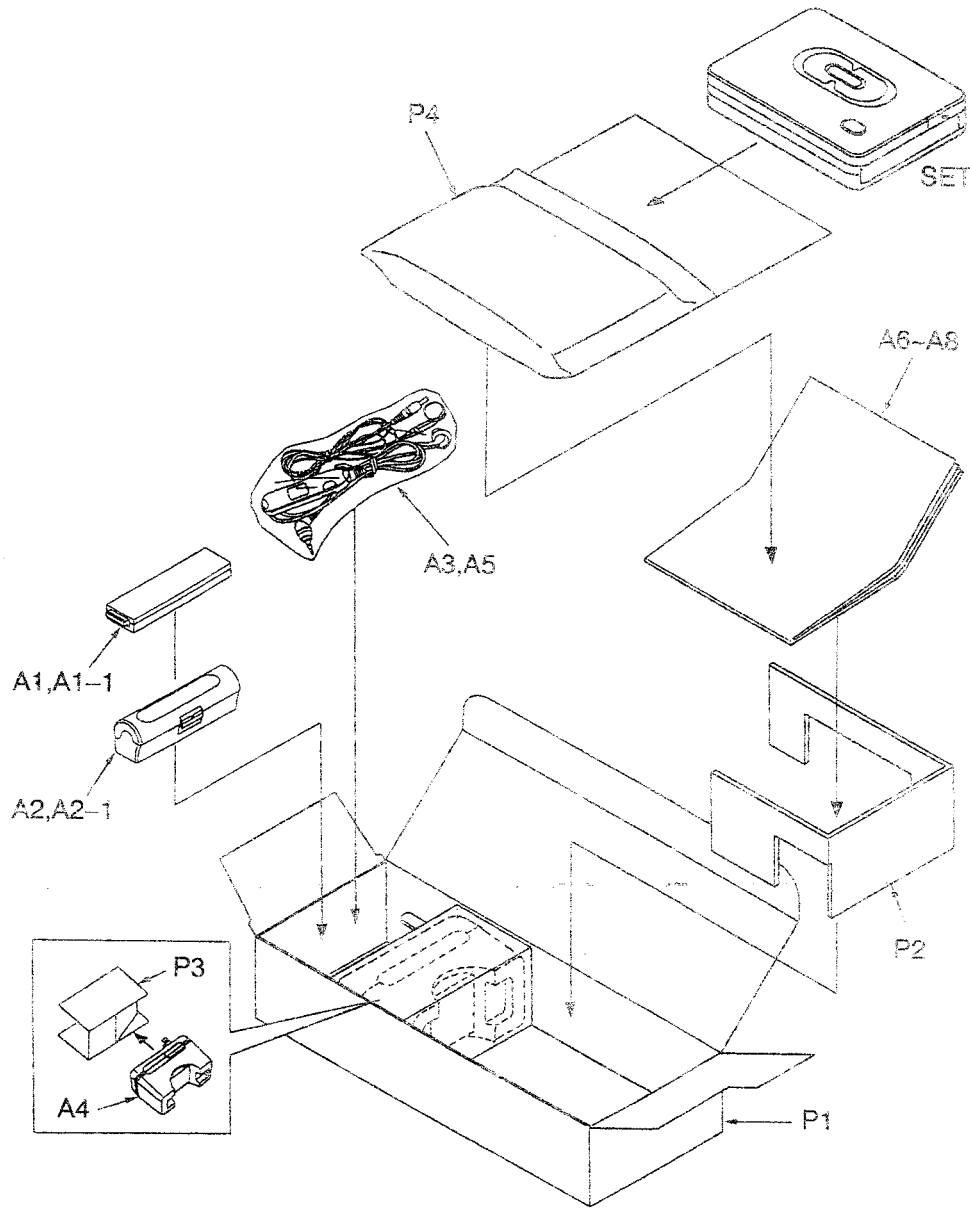
(K)...For Black Type (S)...For Silver Type

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RYF0400J-K	CASSETTE LID ASS'Y (K)	[M]
1	RYF0400J-S	CASSETTE LID ASS'Y (S)	[M]
1-1	RHQ0062-K	SCREW (K)	[M]
1-1	RHQ0062-S	SCREW (S)	[M]
1-2	RMA0976	LINK ANGLE·R	[M]
1-3	RXM0059	LINK UNIT·L	[M]
2	RHQ0059-K	SCREW (K)	[M]
2	RHQ0059-S	SCREW (S)	[M]
3	RHQ0061-K	SCREW (K)	[M]
3	RHQ0061-S	SCREW (S)	[M]
4	RKK0097-K	BATTERY COVER (K)	[M]
4	RKK0097-S	BATTERY COVER (S)	[M]
5	RMR1009-H1	JACK HOLDER (K)	[M]
5	RMR1009-1H1	JACK HOLDER (S)	[M]
6	RGK0839-H	ORNAMENT·A	[M]
7	RGK0840-H	ORNAMENT·B	[M]
8	RGK0841-H	ORNAMENT·C	[M]
9	RGV0166-1S	KNOB, OPEN	[M]
10	RHE5119YA	SCREW	[M]
11	RHW22002	WASHER	[M]
12	RMA0890	LEVER	[M]
13	RMB0442-1	SPRING	[M]
14	RMZ0371A	SHEET	[M]
15	RXQ0442	LOCK UNIT	[M]
16	XQN14+BG4FZ	SCREW	[M]
17	RYK0729-K	CABINET ASS'Y (K)	[M]
17	RYK0729-1S	CABINET ASS'Y (S)	[M]
17-1	RGV0167-H	KNOB, DOLBY (K)	[M]
17-1	RGV0167-1H	KNOB, DOLBY (S)	[M]
17-2	RGV0180-H	KNOB, S-XBS/REV MODE (K)	[M]
17-2	RGV0180-1H	KNOB, S-XBS/REV MODE (S)	[M]
18	RJH9208	CONNECTION TERNINAL (S1)	[M]
19	RHQ0060-N	SCREW	[M]
20	RHQ0013-1	SCREW	[M]
21	RJC99027	R. BATTERY TERMINAL (+)	[M]
22	RJC99028	R. BATTERY TERMINAL (-)	[M]
23	RJR0154-1	BATTERY SHAFT	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPK0926	PACKING CASE (K)	[M]
P1	RPK0927	PACKING CASE (S)	[M]
P2	RPQ0581-1	PAD	[M]
P3	RPQ0575	SPACER 1	[M]
P4	RPF0127	SPACER 2	[M]
		ACCESSORIES	
A1	RP-BP62EYS1	RECHARGEBLE BATTERY	[M]
A1-1	RFA0475-Q	R. BATTERY CARRYING CASE	[M]
A2	RFA0617-H	DRY CELL BATTERY CASE	[M]
A2-1	RKK0071-H	BATTERY CASE COVER	[M]
A3	RFEV133P-KS	STEREO EARPHONES	[M]
A4⚠	RP-BC155AEY	CHARGER	[M] (E)
A4⚠	RP-BC155EBYA	CHARGER	[M] (EB)
A5*	RKB205ZA-0	EAR PADS	[M]
A6	RQA0117	WARRANTY CARD	[M]
A7	RQT3965-E	INSTRUCTION MANUAL	[M]
A8	RQCB0169	SERVICENTER LIST	[M]
		JIG/TOOL	
SA1	QZZCWAT	TAPE SPEED ADJ.	[M]

* This item is not attached merchandise, but it is supplied as a replacement parts.

■Packaging



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